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Foreword

iii

1. Service Employees' Acceptance of Hotel Front Office Systems: A Test of Technology Acceptance Model
Mohamad Abdullah Hemdi 1
2. A New Estimator and its Performance
Ng Set Foong
Low Heng Chin
Quah Soon Hoe 21
3. The Sustainable Competitive Advantage: Elements of Business Strategy for Surviving in the Franchising Industry
Shaira Ismail 39
4. The Manifestation of Native Language Transfer in ESL Learning
Mah Boon Yih 61
5. Exploring International Construction Projects: Views from Malaysian Construction Firms
Che Khairil Izam Che Ibrahim
Abdul Rahman Ayub
Nadira Ahzahar
Siti Hafizan Hassan 71
6. Pengurusan Perubahan Menurut Perspektif Islam
Zulkifli Dahalan
Wahairi Mahmud 93
7. Pembangunan Sains dan Teknologi di IPTA: Satu Analisis Sejarah
Rahimin Affandi Abd Rahim
Nor Adina Abdul Kadir
Ahmad Faisal Abdul Hamid
Zulkifli Dahalan 115

8. Masalah Pembelajaran Urutan Kata dalam Ayat Bahasa Mandarin dalam Kalangan Pelajar Bukan Penutur Asli Hoe Foo Terng Cheun Heng Huat Ho Wee Chee	149
9. The Influences of Gender, Courses and Speaking English at Home on Factors Contributing to Poor Spoken English Cheang Eng Kwong	165
10. Persepsi Pelajar Terhadap Kredibiliti Pensyarah Pendidikan Islam: Satu Kajian Che Haslina Abdullah Zulkefli Mohamad Siti Khalijah Majid Saharani Abdul Rashid	183
11. Konsep Asas Ilmu Perubatan Islam Menurut Ibn Sina Roshaimizam Suhaimi Jasni Sulong	201
12. Pendidikan Islam dalam Pembelajaran Prasekolah: Kajian Terhadap Kurikulum Pengajaran Beberapa Prasekolah Terpilih Zulkifli Dahalan	215
13. Peranan Pensyarah dalam Penambahbaikan Kualiti Pengajaran di UiTM Peridah Bahari Fatimah Bahari	231
14. Pertembungan Tamadun Islam dan Tamadun Barat: Di Mana Letaknya Konflik? Mohd. Hapiz Mahaiyadin Khaliff Mu'ammam A. Harris	241
15. Kedudukan Para Nabi, Malaikat dan Jin Menurut Perspektif Islam Halipah Hamzah	257

Foreword

Alhamdulillah. Firstly, I would like to express my thanks and congratulations to the Editorial Board of *Esteem Academic Journal* of Universiti Teknologi MARA (UiTM), Pulau Pinang for their diligent work in helping to produce this second issue of volume 5. I also would like to thank the reviewers for the excellent vetting of the manuscripts. A special thanks to University Publication Centre (UPENA) of UiTM for giving us this precious opportunity to publish twice this year. In this bilingual science & technology and social sciences issue, similar to the first issue we managed to invite more reviewers from our university as well as other universities in Malaysia. In the near future, we will approach and invite more international reviewers to be in the Editorial Board in order to internationalize our journal. Again, this current issue remarks a new height of the journal standard.

In this issue, we have compiled another 15 interesting articles. The first article is entitled “Service Employees’ Acceptance of Hotel Front Office Systems: A Test of Technology Acceptance Model” written by Mohamad Abdullah Hemdi. The author makes an attempt to investigate the relationship between information system quality, perceived ease of use, perceived ease of usefulness and attitude towards use by adopting an extended technology acceptance model (TAM). This article also presents theoretical and practical contributions for hotel managers and hotel information system (HIS) practitioners in order to increase frontlines acceptance of HFOS. The second article by Ng Set Foong, Low Heng Chin and Quah Soon Hoe proposed a new estimator as an alternative of the Ordinary Least Squares Estimator for linear regression model. This new estimator is shown to have a reduction in mean squared error compared to the mean squared errors of the special case of Liu-type estimator and the Ordinary Least Square Estimator under certain conditions.

Shaira Ismail in her article studies the elements of business strategy for surviving in the franchising industry. The author concluded that the firm’s competitive advantages need to be explored and defined as a blueprint for business strategic planning. The extremely important factors contributing to a company’s competitive advantage are in relations to customers and products. The fourth article by Mah Boon Yih is primarily concerned about how the learner’s existing linguistic knowledge influences the course of English language development among Chinese ESL learners.

The use of English language presented in the form of written work from the samples of 12 students has manifested itself the impact of their L1 (Chinese) transfer in their second language acquisition.

The fifth article by Che Khairil Izam Che Ibrahim et al. surveyed the awareness on analyzing major determinants of goals and benefits in international construction market. Findings indicate that as Malaysian construction firms go international, determination of a firm's basic goals and long term benefits is a really important aspect in exploring international construction projects. Zulkifli Dahalan and Wahairi Mahmud in their article entitled "Pengurusan Perubahan Menurut Perspektif Islam" discuss how managing changes can strengthen an organization, in a way that is in accordance to Islam. Leaders play important role since the success of an organization depends on the leaders' ability to manage the changes.

Rahimin Affandi Abd Rahim et al. focused on the review of the development of Islamic science and technology framework in public universities. The authors concluded that the process and move in developing Islamic science and technology framework in universities is still a distant away from reaching its target. The eighth article by Hoe Foo Terng, Cheun Heng Huat and Ho Wee Chee looks into the problems and difficulties in learning phrases and sentences in Mandarin language among non-Mandarin spoken students as well as the causing factors and the strategies to overcome the problems. The results show that students always make Mandarin grammar mistakes due to the influence of their mother tongue language, mistakes by opposing the logical, chronological or time, or carelessness.

The article entitled "The Influences of Gender, Courses and Speaking English at Home on Factors Contributing to Poor Spoken English" by Cheang Eng Kwong highlights the factors that contribute to the poor proficiency of spoken English among the diploma students in UiTM Pulau Pinang. The results of the study concluded that both internal and external factors have resulted in the poor use of spoken English among the students. The tenth article by Che Haslina Abdullah et al. is a result of a research on the students' perception on lecturers teaching Islamic Studies course. The results indicated a high percentage of students agree that the Islamic Studies lecturers have higher credibility.

The eleventh article by Roshaimizam Suhaimi and Jasni Sulung entitled "Konsep Asas Ilmu Perubatan Islam Menurut Ibn Sina" emphasizes on Ibn Sina's contributions in medical or medicine knowledge as well as the everlasting Islamic medical knowledge that is still being used until today although his name has not been properly recognized and acknowledged

by the West. Zulkifli Dahalan's article entitled "Pendidikan Islam dalam Pembelajaran Prasekolah: Kajian Terhadap Kurikulum Pengajaran Beberapa Prasekolah Terpilih" concentrates on the Islamic learning process and curriculum in selected kindergarten or preschool. The authors monitor the total learning hours for Islamic Studies course and other courses and suggested Islamic Studies course to be as a part of the preschool curriculum.

The article entitled "Peranan Pensyarah dalam Penambahbaikan Kualiti Pengajaran di UiTM" by Peridah Bahari and Fatimah Bahari discusses the role of lecturers in the development of higher learning as well as to enhance the quality of teaching. The fourteenth article discusses the conflict between Islamic civilization and Western civilization. The authors, Mohd. Hapiz Mahaiyadin and Khaliff Mu'ammam A. Harris suggested that the Islamic civilization could coexist with the Western if the West is able to understand Islam and the Muslim society. However, the full understanding is difficult to achieve since Islam civilization is concerned about revealing the truth while the Western civilization is about concealing the truth. The last article entitled "Kedudukan Para Nabi, Malaikat, Jin dan Iblis Menurut Pemikiran Islam" written by Halipah Hamzah looks into the position of *nabi*, *malaikat*, *jin* and *iblis* from an Islamic point of view.

Mohd Aminudin Murad

Chief Editor

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Service Employees' Acceptance of Hotel Front Office Systems: A Test of Technology Acceptance Model

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ABSTRACT

Technology is gradually becoming a critical source of sustainable competitive advantages in the hospitality industry. In view of the benefits that IT provides to the hospitality industry, the extensive use of technology would appear to be an inevitable trend. However, despite the increasing use of technology in the hospitality industry, few studies have been conducted to investigate the relationship between the external variables and the technology acceptance model (TAM) framework to explain the acceptance behavior of hospitality organizations. This paper makes an attempt to investigate the relationship between information system quality, perceived ease of use, perceived usefulness, and attitude towards use by adopting an extended TAM. 240 frontline employees from twelve 5-star hotels in Penang, Malaysia participated in this study. Empirical findings indicate that the significance of all but two new variables. As a result, the study is able to find the acceptance of hotel front office systems (HFOSs) from the perspective of hotel frontline employees through the external variables of information system quality in order to enhance the model. Additionally, the paper presents theoretical and practical contributions for hotel managers and hotel information system (HIS) practitioners in order to increase frontlines acceptance of HFOS.

Keywords: *information system quality, hotel front office systems (HFOS), attitude towards use, technology acceptance model*

Introduction

Technological advances in the past decade have impacted the customers, the producers and the customer – producer exchange mechanisms in service transactions. This has impacted the core technology used in the service production and delivery process and consequently, the landscape of the service industry has changed over the past decade as more and more firms have become technologically oriented in their service production and delivery functions. The change in landscape is predominantly because of the role of information technology (IT) (Connolly & Sigala, 2001), which “is the single greatest force affecting change in the hospitality industry” (Connolly & Olsen, 2000, p. 73). Accordingly, the hotel industry also extensively relies on IT to improve employees’ productivity and efficiency, as well as to improve customer satisfaction, since IT has been perceived to have notable advantages in competition (Ham, Kim & Jeong, 2005; Lam, Cho & Qu, 2007).

For this reason, the study related to technology adoption and diffusion has been largely performed by researchers and practitioners in the hospitality industry (Siguaw, Enz & Namasivayam, 2000). Many studies have found that there is a positive relationship between IT investment and organization productivity and performance (Byrd & Turner, 2001; Rai, Patnayakuni & Patnayakuni, 1997). However, researchers have stated that even though there are positive effects and benefits, new IT would not be fully accepted if barriers of external factors influenced the acceptance of IT (Davis, 1989; Davis, Bagozzi & Warshaw, 1992). Based on the Fishbein and Ajzen’s Theory of Reasoned Action (TRA) (1975), the proposed technology acceptance model (TAM) can explain the process of the acceptance of IT on an individual level (Davis, 1989). Therefore in this study, Davis’s (1989) TAM is utilized as a theoretical background as it is regarded as one of the most influential research models in explaining the users’ IT usage or acceptance behavior in various contexts (Bruner & Kumar, 2005; Chen, Gillenson & Sherrell, 2002; Davis, Bagozzi & Warshaw, 1989; Hong, Thong, Wong & Tam, 2002; Lee, Kim & Lee, 2006).

Moreover, technology adoption in hotel organizations is a complex process, and it has demonstrated unique characteristics, thus calling for distinctive approaches in examining technology adoption behavior such as organization technology climate and technology characteristics (Wang & Qualls, 2007). Law and Jogaratnam (2005) stated that hotels have widely adopted technologies to improve operational efficiency, enhance

service quality, and lessen costs. However, despite the increasing use of technology in the hospitality industry, few studies have been conducted to investigate the relationship between the external variables and the TAM framework to explain the acceptance behavior of technology in tourism and hospitality organizations (e.g., Lam et al., 2007; Lee et al., 2006; Wober & Gretzel, 2000).

Hotel information system (HIS) is the most typical IT tool in hotel organizations. HIS is divided into four categories of front office system, back office system, restaurant and banquet management system, and guest related interface (Ham et al., 2005). Among these, the hotel front office systems (HFOS) is the most important system, which operates 24 hour a day, 365 days a year. This system is used by service employees at the point of contact with the customer. Accordingly, this study has selected the employees who use the HFOSs as the users of IT.

The purpose of the current study is to investigate the relationship between antecedents and users' acceptance of a HFOS through the TAM framework, which is based on the survey of hotel frontline employees. Utilizing the result, this study can demonstrate the acceptance of HFOSs from the perspective of hotel frontline employees through the information system quality as the external variables. Specifically, the objectives of this study are: (1) to investigate how information system quality can lead to the formation of perceived ease of use and perceived usefulness of HFOSs; (2) to assess the impact of perceived ease of use on perceived usefulness and attitude towards use of HFOSs. This study would contribute to the theoretical development of behavior formation regarding HFOS acceptance in the hotel industry. Results of the study can also provide practical implications for hotel managers and HIS practitioners to plan strategically and implement effective tools to motivate frontline employees towards acceptance and actual use of HFOSs.

Literature Review

TAM and Related Theories

Technology adoption can be successful, however, only when employees accept and effectively use technology. Therefore, an organization should understand that the acceptance process is essential in making the process effective. There are four leading theories that explain the acceptance process (Venkatesh & Brown, 2001). These theories are: (1) the TRA;

(2) the theory of planned behavior (TPB); (3) the innovation diffusion theory (IDT) and (4) the TAM. The main concept of TRA is that a person's actions are determined by behavioral intention, and behavioral intention is influenced by attitude and the subjective norm. While on one side, attitude is primarily affected by the factors of belief and evaluation, it is shown that the subjective norm is influenced by norm belief and the motivation to comply (Fishbein & Ajzen, 1975). The TPB, as an extended model of TRA, which includes the primary factor of perceived behavioral control, states that an individual's actions are influenced by both interior and exterior control factors (Ajzen, 1991). The TAM has been widely applied to studies of technology acceptance and usage behavior (Bruner & Kumar, 2005; Davis et al., 1989; Hong et al., 2002; Lee et al., 2006). TAM adapts Fishbein and Ajzen's (1975) TRA as a basis for specifying the casual linkages flow in a sequence from beliefs, attitudes, and intentions to behaviors. The TAM, which was introduced by Davis (1989), modified TRA to predict computer adoption by replacing the belief determinants of TRA with two key beliefs (i.e., perceived ease of use and perceived usefulness). Davis (1989, p. 320) defined perceived ease of use as "the degree to which a person believes that use of a particular system would be free of effort"; in contrast, perceived usefulness is "the degree to which a person believes that use of a particular system would enhance his or her job performance". In a TAM, technology acceptance or use is determined by behavioral intention. Behavioral intention, in turn, is affected by attitude towards use, as well as the direct and indirect effects of perceived ease of use and perceived usefulness. Both perceived ease of use and perceived usefulness jointly affect attitude towards use, whilst perceived ease of use has a direct impact on perceived usefulness.

In the TAM, through perceived ease of use and perceived usefulness, external variables such as personal features (e.g., computer self-efficacy, innovativeness, and past adoption behavior), system features (e.g., design and functionality), and organizational features (e.g., top management support and training) can affect attitude and behavior. Therefore, Davis et al. (1989) proposed that the external variables of a TAM can affect the beliefs of perceived ease of use and perceived usefulness. In this study, information system quality (information quality, system quality, and service quality) as external variables of TAM are examined.

Hypotheses

Information System Quality, Perceived Ease of Use, and Perceived Usefulness

Information quality plays a dominant role in the success of an information system (Agarwal & Prasad, 1999; Rai, Lang & Weiker, 2002). Igbaria, Guimaraes, and Davis (1995) showed that information quality had an effect on perceived ease of use and perceived usefulness. Also, system quality is important in user beliefs (Hong et al., 2002; Lederer, Maupin, Senza & Zhuang, 2000; Ruth, 2000). Likewise, in the study conducted by Ruth (2000) on the effect of system quality on Internet shopping and perceived ease of use, results showed that system quality had no direct effect on Internet shopping behavior, but perceived ease of use and perceived usefulness were relatively strong and positive, and they are expected to have a constant and direct effect. Ahn, Ryu, and Han (2004) classified the quality of online properties for an Internet shopping mall into system quality, information, system, and service quality. The actual use of the Internet shopping mall was analyzed by a TAM. It was found that quality affects perceived ease of use and perceived usefulness. Thus, the following hypotheses are proposed:

Hypothesis 1a: Information quality positively affects perceived ease of use.

Hypothesis 1b: System quality positively affects perceived ease of use.

Hypothesis 1c: Service quality positively affects perceived ease of use.

Hypothesis 2a: Information quality positively affects perceived usefulness.

Hypothesis 2b: System quality positively affects perceived usefulness.

Hypothesis 2c: Service quality positively affects perceived usefulness.

Perceived Ease of Use, Perceived Usefulness, and Attitude Towards Use

Most studies on technology acceptance showed that perceived ease of use directly influenced perceived usefulness and attitude towards use (e.g., Ahn et al., 2004; Bruner & Kumar, 2005; Chen et al., 2002; Davis et al., 1989). Likewise, researches on technology acceptance pertaining to various fields showed perceived usefulness has a positive effect on attitude towards expected use and actual use (e.g., Adams, Nelson &

Todd, 1992; Agarwal & Prasad, 1999, 1997; Davis, 1989; Shin, 2004). In the study conducted by Lederer et al. (2000) on web usage, it was found that perceived ease of use and perceived usefulness of web use have positive influences on attitude towards using the web.

In addition, Davis (1989) stated that through perceived usefulness, perceived ease of use indirectly influences attitude towards use and acceptance intention, which in turn clearly shows that perceived ease of use is the antecedent of perceived usefulness. Also, perceived ease of use does not directly influence acceptance or actual using, but the model assumes that through the medium of technology acceptance behavior, there is an indirect relationship (Davis, 1989). Thus, the following hypotheses are proposed:

Hypothesis 3: Perceived ease of use positively affects perceived usefulness.

Hypothesis 4: Perceived ease of use positively affects attitude towards use.

Hypothesis 5: Perceived usefulness positively affects attitude towards use.

From the literature review, the framework for this study is presented as in Figure 1.

Methodology

Measurements

In this study, responses to the items in information system quality dimensions (i.e., information, system, and service quality), perceived ease

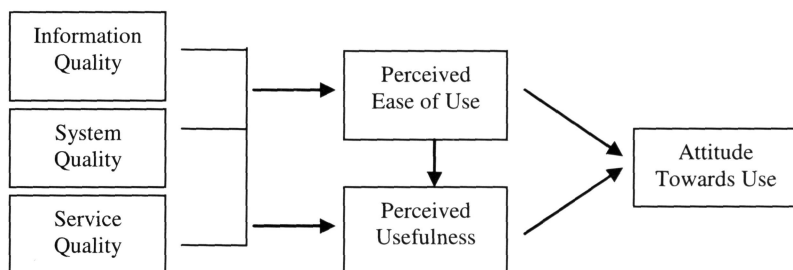


Figure 1: Theoretical Framework

of use, perceived usefulness, and attitude towards use were measured on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The Information quality construct was measured by seven items (Ahn et al., 2004; Bailey & Pearson, 1983; Eldon, 1997). The system quality construct was composed of six items (Ahn et al., 2004; Bailey & Pearson, 1983; Eldon, 1997), and the service quality construct comprised six items (Bailey & Pearson, 1983; Baroudi & Orlikowski, 1988; Eldon, 1997). Similarly, the perceived ease of use construct was measured by three items (Davis, 1989; Venkatesh & Davis, 2000), and the Perceived usefulness construct had four items (Davis, 1989; Venkatesh & Davis, 2000). Lastly, the Attitude towards use construct was composed of five items (Davis et al., 1992).

Sample and Data Collection

The research sample consisted of frontline service employees from twelve 5-star hotels in Penang, Malaysia. These hotels are well-known international chain hotels. In addition, the research sample of hotel frontline employees that used front office systems comprised front desk, housekeeping, room reservations, sales and marketing, bell desk, guest relation officer (GRO), and executive floor lounge (EFL). A total of 300 questionnaires were distributed, and 250 (83.3%) questionnaires were received. Ten of these questionnaires were discarded due to large portions of missing values. Finally, 240 (80.0%) questionnaires were analyzed in this study.

Data Analysis

This study used descriptive statistics, exploratory factor analysis, and multiple regression analysis techniques. Exploratory factor analysis was used to assess the convergent and discriminant validity of the variables in the model. Separate factor analyses were performed for independent, mediating, and dependent variables. These exploratory factor analyses employed maximum likelihood methods of extraction, where both orthogonal and oblique rotations were used to determine factor structure (Kim, Price, Mueller & Watson, 1996). An eigenvalue criterion (eigenvalue greater than or equal to 1) was used to determine the number of factors. Factor loadings greater than or equal to 0.50 were considered, while a cut-off point of 0.35 is observed for cross-loadings as evidence of discriminant validity (Igbaria, Iivari & Maragahh, 1995). Sekaran (2000)

suggestion that the minimum acceptable reliability level be set at 0.60 was followed. Hypotheses were subsequently tested using multiple hierarchical regressions (Cohen & Cohen, 1975). Multiple regression analysis was used because it provided estimates of net effects and explanatory power. The explained variance (R²) was used in this research to measure explanatory power.

Findings and Discussions

Profile of Respondents

Gender distribution of the respondents was slightly higher for males (57.1%). A majority of the respondents (61.1%) were unmarried. In terms of ethnicity, Malays constitute almost 70.0% of the sample. Educational levels were generally high. Respondents who had completed high school accounted for 15.5%, respondents who had completed college numbered 56.6%, while respondents who had graduated from university comprised 27.9% of the survey samples. Additionally, 55.7% of the respondents worked at the front desk, 30.5% of respondents worked in housekeeping, and the remaining 13.8% worked in other departments (e.g., room reservations, sales and marketing, bell desk, GRO, and EFL). Finally, the sample can be considered relatively young considering the fact that majority (65.3%) of the respondents were aged below 30 years old (SD = 7.09 years).

Factor and Reliability Analyses

Principal component factor analysis with varimax rotation was conducted to validate whether the measures used in this study are conceptually distinct. Three separate factor analyses were conducted on Information system quality dimensions (independent variables), Perceived ease of use and Perceived usefulness (mediating variables), and Attitude towards use (dependent variable). Only factors having latent roots or eigenvalues greater than one were considered significant and retained for further analysis (Hair, Anderson, Tatham & Black, 1998). Sekaran's (2000) suggestion that the minimum acceptable reliability level be set at 0.60 was followed. As conceptualized, three-factor solutions were obtained explaining 66.6% of total variance in Information system quality. The reliability coefficients were 0.75 for the information quality, 0.78 for the

system quality, and 0.82 for the service quality. Next, a principal component factor analysis with varimax rotation was conducted to validate whether the respondents perceived the two perceived ease of use and perceived usefulness constructs to be distinct. A two-factor solution was obtained explaining 60.6% of the total variance. The two factors were subsequently labeled as perceived ease of use and perceived usefulness, as conceptualized earlier. The Cronbach Alpha for perceived ease of use and perceived usefulness were 0.71 and 0.84 respectively. Finally, a similar factor analysis was undertaken to examine the dimensionality of the dependent variable (ATU). A single factor solution emerged explaining 70.0% variance and the Cronbach's alpha was 0.75. Thus, all constructs in this study demonstrated acceptable reliability.

Means, Standard Deviations, and Inter-Correlations of Study Variables

Mean, standard deviations, and Pearson correlation coefficients indicating the relationships between the study variables were contained in Table 1.

The correlations among the constructs were calculated using composite scores. Specifically, composite scores for each construct were computed by averaging scores across items representing that construct. As shown in Table 1, the level of information quality was perceived to be moderate (Mean = 3.34, SD = 0.81). System quality and service quality,

Table 1: Means, Standard Deviations, and Inter-Correlations of the Study Variables

Study variables	Mean	Std. deviations	1	2	3	4	5	6
1. Information quality	3.34	0.81	-					
2. System quality	3.82	0.87	0.43*	-				
3. Service quality	3.73	0.91	0.31*	0.37*	-			
4. Perceived ease of use	3.57	0.92	0.38*	0.46*	0.32*	-		
5. Perceived usefulness	3.84	0.85	0.40*	0.48*	0.34*	0.36*	-	
6. Attitude towards use	3.74	1.16	0.32*	0.32*	0.38*	0.43*	0.44*	-

Note: N = 240; *p < .05, **p < .01.

on the other hand, were perceived slightly high (Mean = 3.82, SD = 0.87 and Mean = 3.73, SD = 0.91). Both perceived ease of use and perceived usefulness were perceived highly by the respondents (Mean = 3.57, SD = 0.92 and Mean = 3.84, SD = 0.85). Similarly, respondents in this study perceived highly on the attitudes towards use construct (Mean = 3.74, SD = 1.16). All the study variables show significant positive correlations amongst each other.

Hypotheses Testing Results

To test the hypotheses of this study, multiple hierarchical regression analyses were conducted. Table 2 shows the summary of regression analyses to ascertain the impact of information system quality on perceived ease of use (PEU) and perceived usefulness (PU).

As shown in Table 2, when information system quality (e.g., information, system, and service quality) were regressed on PEU an R2 value of 0.42 was obtained suggesting that 42% of the variance in PEU were being explained by the information system quality constructs. System quality ($\beta = .29, p < .01$) and service quality ($\beta = .35, p < .01$) were found to have significant and positive effects on PEU. Thus, Hypotheses H1b and H1c are supported. The standardized beta value of the estimated coefficients showed that service quality had the greatest impact on perceived ease of use for HFOSs. In this way, the results of this study are contrary to the results of previous studies (e.g., Agarwal & Prasad,

Table 2: Regression Results on the Impact of Information System Quality on PEU and PU

Predictors	Criterion variables	
	PEU	PU
	Std. β	Std. β
Information quality	.04	.33**
System quality	.29**	.23**
Service quality	.35**	.10
Perceived ease of use (PEU)		
Perceived usefulness (PU)		
R^2	.42	.38
Adj. R^2	.41	.35
F Change	33.93**	10.08**

Note: N = 240, * $p < .05$, ** $p < .01$

1999; Rai et al., 2002). Although the information is accurate and efficient, it is unrelated to the belief that the information is easy to use.

An R^2 value of 0.38 was obtained when information system quality were regressed on PU suggesting that 38% of the variance in PU were being explained by these constructs. The regression correlations between perceived usefulness and information quality, and system quality were positive and significant at 0.33 and 0.23, respectively. Thus, Hypotheses H2a and H2b are supported in this study. The correlation between perceived usefulness and service quality was positive but not significant at 0.10. Therefore, Hypothesis H2c is not supported. The standardized beta value of the estimated coefficients showed that information quality ($\beta = .33$, $p < .01$) had the greatest impact on perceived usefulness of HFOSs. Previous studies supported the concept that information quality plays a dominant role in information system success (e.g., Lederer et al., 2000; Liu & Arnett, 2000; Rai et al., 2002; Teo & Choo, 2001). In this study, information quality acts as the most important determinant of perceived usefulness. In an involuntary environment, service quality must be efficiently supported in order to lead to the voluntary use of IT for the improvement in productivity at work. However, if service quality, such as systematic support, is offered in an HIS related department, users will perceive the use of the front office systems as easy, but will not perceive it as useful.

To test for H3, H4, and H5, PEU was regressed on PU, and PEU and PU were further regressed on ATU. Table 3 shows the regression results of these analyses.

Table 3: Regression Results on the Impact of PEU
and PU on ATU

Predictors	Criterion variables	
	PU	ATU
	Std. β	Std. β
Perceived ease of use (PEU)	.42*	.37*
Perceived usefulness (PU)	-	.31*
R^2	.56	.43
Adj. R^2	.53	.41
F Change	63.07**	77.11**

Note: N = 240, * $p < .05$, ** $p < .01$

As shown in Table 3, an R2 value of 0.56 was obtained when PEU was regressed on PU suggesting that 56% of the variance in PU was being explained by PEU. Significant and positive relationships were found between perceived ease of use and perceived usefulness. Therefore, Hypothesis H3 receives support given the significant and positive standardized beta value ($\beta = .42, p < .01$). This result implies that the easier the use of front office systems is perceived to be, the more likely employees will perceive their usefulness. This result corroborates with the results of the study performed by Agarwal and Prasad (1997), Burton-Jones and Hubona (2006), Davis et al. (1992).

Perceived ease of use ($\beta = .37, p < .01$) and perceived usefulness ($\beta = .31, p < .01$) were positively associated with attitude towards use. Therefore, Hypotheses H4 and H5 were supported. Results from this study showed that hotel frontline employees have a positive attitude towards a particular technology to the degree that they believe the use of the technology will be relatively free of additional effort. These results contradict the findings claimed by some researchers (e.g., Adams et al., 1992; Agarwal & Prasad, 1997) that perceived ease of use did not have a direct effect on attitude towards use. However, findings of this research were in accordance with the results by Ahn et al. (2004), which showed perceived ease of use and perceived usefulness had a direct effect on attitude towards use. Among the variables within the TAM, perceived ease of use, rather than perceived usefulness, had a greater effect on actual use. This result shows that this is because in an involuntary environment, users need an IT system that is easy to use.

Conclusion

Based on the empirical results of this study, practical directions to increase frontline employees' acceptance of the HFOS can be implemented by the hospitality managers. First, the HFOS must offer a variety of information about the job to frontline employees. In order for service employees to offer professional services to customers, a system must be installed where customer information is offered once, and the hotel customer information can be shared without having to re-offer the data. In other words, all departments must be able to continuously share and update the information. Second, the HFOS must provide a safe and swift transaction time so that frontline employees may decrease the time spent on the system and increase the time spent on customer service.

Also, the HFOS must be designed in such a way that the language and technology are easy to understand. Further, in order to facilitate information sharing, the exchange with other systems should be provided with restricted access, and the HFOS should be flexible to changes.

Third, the helpful support from managers and HIS practitioners is important for frontline employees to use the HFOS more easily. In addition, HIS practitioners must administrate the HFOS to provide swift support in case a problem occurs (e.g., system error or limited technological skill), and must provide sufficient training in order for frontline employees to understand and utilize the HFOS without difficulty. The shorter the time needed for hotel employees to master the skills of IT, the greater their motivation to accept IT will be (Lam et al., 2007). Fourth, in the case where frontline employees need to use HFOSs for obtaining a large quantity and variety of information, convenience and ease of system use should be given higher priority because they are the point of contact for guests. Thus, frontline employees will perceive the HFOS as useful when they can obtain timely information in a convenient and easy way.

Finally, frontline service employees must realize that the benefits (e.g., increasing efficiency, improving productivity, and reducing the time to complete a task) of using HFOSs would lead to better job performance. This, in turn, will improve customer satisfaction and operational efficiency. This is particularly important when a HFOS is implemented, as employees can observe and realize the benefits of using a new HFOS and how it can help improve their performance and enhance guest satisfaction (Lam et al., 2007). If the benefits outweigh the losses in job progress when using the HFOS, this will result in a more positive attitude towards using the system. According to the results, when frontline employees use a HFOS and perceive that through its use, the efficiency, productivity, and outcome of their work would be improved, their motivation will noticeably increase. With this in mind, they recognize the value of the HFOS to their job. Also, when it is believed that job efficiency, productivity, and outcome can be increased, it is determined that the HFOS use will become voluntary. Through this study, hotel managers can consider how to best apply their HFOS in their front office, and to convey the opinion of HFOS users to HIS practitioners.

There are some limitations in this study. First, even though different issues have been investigated, a few areas can be further examined in future studies. In hotels as well as in other organizations, attitude towards the use of IT appears as rather optional or voluntary. The attitude towards IT used presented in studies that applied TAM has primarily focused on

a voluntary environment, where the individual's situation and external variables had a great effect. However, unlike studies of a voluntary environment, there does not seem to be enough studies conducted on a mandatory environment. In future research, different studies can be performed on IT, targeting other technology systems instead of HFOSs. Also, it is important to find factors other than perceived ease of use and perceived usefulness that can affect the attitude towards technology used. Second, although the results show information system quality affects users' beliefs in HFOSs, it is important to realize that other factors may also play an important role in user beliefs. Examples of these factors include computer use experience (Yang, 2005; Zain, Rose, Abdullah & Masrom, 2005), computer self-efficacy (Ong & Lai, 2006; Pituch & Lee, 2004), job relevance (Hu et al., 2003), and innovativeness (Lu, Yao & Yu, 2005). Future research should enhance the search for antecedents affecting user beliefs. Finally, because this study enforced the cross-sectional study, the effects of the time variables cannot be estimated. Therefore, it would be desirable to conduct a longitudinal study by taking into consideration the time periods of system use.

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